

CLAIMS

What is claimed is:

1. In a method of bonding a heat sink or similar member to a dielectric material of an electronic package wherein said dielectric material has a surface having a quantity of silicone thereon and bonding said heat sink or similar member to said surface is accomplished by applying an adhesive to said surface and/or said heat sink, the improvement comprising roughening said surface of said dielectric material prior to applying said adhesive to said surface and/or said heat sink.
2. The method of claim 1 wherein said roughening of said surface of said dielectric material is accomplished by rubbing an abrasive member on said surface.
3. The method of claim 1 wherein said abrasive member is rubbed on said surface for a total of about 5 to about 10 strokes.
4. The method of claim 1 further including substantially curing said adhesive for a predetermined time period at a predetermined temperature.
5. The method of claim 4 wherein said predetermined temperature is room temperature.
6. The method of claim 5 wherein said time period is from about five minutes to about twelve hours.
7. The method of claim 1 further including exposing said surface of said dielectric material to a plasma prior to said applying of said adhesive.

- 1 8. The method of claim 7 wherein said plasma is maintained at a pre-established pressure
2 with a predetermined flow rate for an established time period.
- 1 9. The method of claim 8 wherein said pre-established pressure is about 0.35 torr, said
2 predetermined flow rate is about 75 standard cubic centimeters/minute and said
3 established time period is about 3 minutes.
- 1 10. The method of claim 9 wherein about 300 watts of power are generated during said
2 exposing said surface of said dielectric material to said plasma.
- 1 11. The method of claim 1 further including electrically coupling said electronic package to a
2 host substrate, said coupling occurring prior to bonding said heat sink or similar member
3 to said dielectric material.
- 1 12. A method of marking a dielectric material of an electronic package wherein said
2 dielectric material has a surface with a quantity of silicone thereon and said marking
3 involves the deposition of a predetermined pattern of ink onto said surface, the
4 improvement comprising roughening said surface of said dielectric material prior to said
5 deposition of said predetermined pattern of ink.
- 1 13. The method of claim 12 wherein said roughening of said surface of said dielectric
2 material is accomplished by rubbing an abrasive member on said surface.
- 1 14. The method of claim 12 wherein said abrasive member is rubbed on said surface for a
2 total of about 5 to about 10 strokes.
- 1 15. The method of claim 12 further including exposing said surface of said dielectric material
2 to a plasma prior to said deposition of said predetermined pattern of ink.

1 16. The method of claim 15 wherein said plasma is maintained at a pre-established pressure
2 with a predetermined flow rate for an established time period.

1 17. The method of claim 16 wherein said pre-established pressure is about 0.35 torr, said
2 predetermined flow rate is about 75 standard cubic centimeters/minute and said
3 established time period is about 3 minutes.

1 18. The method of claim 17 wherein about 300 watts of power are generated during said
2 exposing said surface of said dielectric material to said plasma.

1 19. An electronic package comprising:

2 a substrate;

3 a semiconductor chip positioned on and electrically coupled to said substrate;

4 an overmold substantially covering said semiconductor chip, said overmold including a
5 roughened upper surface having a quantity of silicone thereon;

6 a quantity of adhesive positioned on said roughened upper surface; and

7 a heat sink secured to said roughened upper surface by said quantity of adhesive.

1 20. The electronic package of claim 19 wherein said overmold is comprised of polymer
2 material.

1 21. The invention of claim 19 wherein said electronic package is a plastic ball grid array
2 package.